

## ABSTRACT OF THE DISCLOSURE

An optimization to the rapid spanning tree protocol (RSTP) is presented. An intermediate network device configured in accordance with the present invention preferably includes a plurality of ports for receiving and forwarding messages and a spanning tree  
5 protocol (STP) engine which is coupled to the ports. If the device receives a bridge protocol data unit (BPDU) message from a designated port of a neighboring intermediate network device and the BPDU represents a proposal by the neighboring device to rapidly transition its port to the forwarding state, the device first determines whether or not it is the root of the bridged network. If the device is not the root, and the BPDU message was  
10 received on the device's existing root port or on its newly selected root port, the device preferably invokes an "optimal sync" mechanism. Specifically, the device transitions only its alternate root port(s) and the previous root port, if any, to the blocking state, while leaving all of its designated ports, if any, in the forwarding state. The device then returns an agreement BPDU message to the neighboring device.